

What is claimed is:

1. A method for designing filters that approximates the circularly symmetric frequency response achievable using a non-separable filter comprising:
 - (a) selecting a cut-off frequency and designing therefrom a 1-D low pass filter **LP** such that: $\mathbf{LP} = [X_{-n}, X_{-(n-1)}, \dots X_0, \dots X_{n-1}, X_n]$;
 - (b) obtaining a 2-D filter **LPP** by performing the operation: $\mathbf{LP}^* \times \mathbf{LP}$ wherein \mathbf{LP}^* is a column vector having the same entries as **LP** and **LPP** having dimensions given by: $\{2n+1, 2n+1\}$ and generating a 2-D contour plot therefor;
 - (c) designing a 1-D high pass filter **HP** such that: $\mathbf{HP} = [Y_{-m}, Y_{-(m-1)}, \dots Y_0, \dots Y_{m-1}, Y_m]$;
 - (d) obtaining a 2-D filter **HPP** by performing the operation: $\mathbf{HP}^* \times \mathbf{HP}$ wherein \mathbf{HP}^* is a column vector having the same entries as **HP** and **HPP** having dimensions: $\{2m+1, 2m+1\}$ and obtaining a 2-D contour plot therefor;
 - (e) repeating (c) through (d) until the 2-D contour plot of **HPP** overlaps the 2-D contour plot of **LPP**;
 - (f) generating a 2-D filter **ONE** having the dimensions of that of **HPP** with the only non-zero entry of value 1 located at the center of **ONE**;
 - (g) creating matrix **HPPinv** by subtracting **HPP** from **ONE**;
 - (h) convolving **LPP** with **HPPinv** to obtain **DSCRN** having dimensions: $\{2m+2n+1, 2m+2n+1\}$ and obtaining a 2-D contour plot therefor; and
 - (i) repeating (a) through (h) until, by an examination of the 2-D contour plot of **DSCRN**, an approximation to a desired circular symmetry is achieved.

2. A method as in **claim 1**, wherein the dimensions of filters **LPP** & **HPP** are such that the processing by a target media processor, Very Long Instruction Word (VLIW) processor, or Digital Signal Processor (DSP) is optimized.
3. A method as in **claim 1**, wherein one would descreen not by using the non-separable filter **DSCRN** but by first applying the separable filter **LPP** and saving that result as, for example, video_1.
4. A method as in **claim 3**, further comprising applying the **HPP** filter to video_1 and saving that output as, for example, video_2.
5. A method as in **claim 4**, further comprising subtracting video_2 from video_1 to yield descreened output.
6. A method as in **claim 5**, wherein **DSCRN** is applied to image data to determine whether the generated result accomplished an intended result.